

FY12

MICHIGAN PERFORMANCE PLAN

In 2010 Michigan experienced an eight percent drop in incapacitating injuries, one percent drop in total injuries, four percent drop in property damage crashes, and three percent drop in total crashes. Although fatalities were up by eight percent for the year, the highway safety snapshot of Michigan represents improved behavior, enforcement, engineering, and medical care, along with decreased exposure. While it is extremely difficult to achieve high rates of continued improvement, it is Michigan's current success with stakeholders that provides the support to continue to maintain a high degree of traffic safety on the roads. The goal to zero fatalities in Michigan is always a focal point in planning.

The annual Highway Safety Plan (HSP) is Michigan's road map to the next hundred lives saved. It identifies the largest traffic crash problems, promising countermeasures, and the partners to enact them.

PROCESS DESCRIPTION

program purpose: reduce fatalities, injuries, and crashes

Limited resources must be directed to effective countermeasures to address significant traffic safety problems. Perennial problems loom ever-larger against a background of declining fatalities, and improved data etches an image with some facets ever-changing, while others are resistant to change. A vast body of research and experience proves the effectiveness of some programs and strategies, sometimes in the face of what "everyone knows." It is key to maintain focus on what will save lives and prevent injuries rather than what is popular or easy. These strategies must be implemented effectively, with attention to local circumstances, and monitored for impact. Success is measured against goals and benchmarks for crash, injury, and fatality reduction.

The Office of Highway Safety Planning (OHSP) cannot pursue these programs without the enthusiastic participation of partners at the national, state, and local levels. In 2007, a National Cooperative Highway Research Program report cited the role of effective cooperation in creating a culture of safety in Michigan. This cooperative culture helps Michigan coordinate efforts in enforcement, engineering, education, and emergency medical services into comprehensive traffic safety programs that save lives.

Pre-planning Steps

Implementation of one year's HSP occurs in conjunction with planning for the next. Planning begins with an After Action Review of the previous year, identifying successful areas, those in need of improvement, and what changes would yield greater success. OHSP then makes any necessary revisions to the planning process and calendar (Exhibit 1). This pre-planning ensures that OHSP's program development remains dynamic, efficient, and effective.

Each step of the planning process is identified below:

1. Problem Identification
2. Goal Determination and Analysis
3. Traffic Safety Partner Input
4. Budget Development
5. Project Selection
6. Performance Measures

Plan Organization

The performance plan follows the steps of OHSP's planning process. Crash data analysis, research and consultation with program partners and stakeholders continue throughout each step. In addition, program and financial staff meet biweekly at Highway Safety Plan/Program Development Meetings, during which information is exchanged about program activities, and grant and revision activity is monitored to ensure programs remain on-track for successful completion. OHSP staff members incorporate emerging information into program development and implementation whenever possible.

EXHIBIT 1 – HSP Planning Outline

FY 2012 HSP PLANNING CALENDAR		
ACTION	DATES	DETAILS
HSP Committee Planning Session	NOVEMBER DECEMBER	<ul style="list-style-type: none"> ❖ Review past year's activity ❖ Review current year's activity ❖ Review crash data ❖ Review state and national priorities ❖ Update problem identification ❖ Quantify goals
Program Partner Meetings	JANUARY FEBRUARY	<ul style="list-style-type: none"> ❖ Meet with program partners, obtain input ❖ Review planning session output ❖ Review data specific to the program ❖ Review quantitative goals ❖ Outline grant opportunities ❖ Identify long-term strategies (>3 years)
Create Grant Development Plans	MARCH APRIL	<ul style="list-style-type: none"> ❖ Consult with current and prospective grantees ❖ Program area presentations ❖ Create draft Grant Development Plans ❖ Establish draft budget ❖ HSP management team reviews programs and budgets
Formal Grant Development	MAY JUNE	<ul style="list-style-type: none"> ❖ GDPs finalized ❖ HSP budget finalized ❖ Notify grantees of grant timelines ❖ Send grantees grant templates
Prepare HSP and Performance Plan	JUNE	<ul style="list-style-type: none"> ❖ Monitor grant development process ❖ Create draft HSP ❖ Create draft performance plan
Approve HSP and Performance Plan	JULY	<ul style="list-style-type: none"> ❖ Administrative review of performance plan ❖ Administrative review of HSP ❖ Approve FY 2012 performance plan and HSP ❖ Create in-house grants ❖ Begin grant entry in e-grants
Circulate HSP and Performance Plan	AUGUST	<ul style="list-style-type: none"> ❖ Print and distribute performance plan and HSP to: NHTSA, FHWA, State and Local Agencies ❖ Post to web site
Grant Approval and Implementation	SEPTEMBER OCTOBER	<ul style="list-style-type: none"> ❖ Approve and start implementation of FY 2012 grants. ❖ Conduct grant orientation meetings
Annual Evaluation Report	NOVEMBER	<ul style="list-style-type: none"> ❖ Annual evaluation report prepared for FY 2011 HSP

1. PROBLEM IDENTIFICATION

The planning process begins with data analysis. The Office of Highway Safety Planning cannot solve problems if it is not known what problems exist. OHSP looks at many variables such as the location and time of the crash, driver and environmental elements and various mitigating factors in order to determine what emerging and current issues are occurring on the roads in Michigan.

The first pass through the data highlights those factors that contribute to 10% of fatalities and incapacitating injuries. These are key variables that cannot be ignored, and all receive goals in the next section. Other factors may be added to the list for other reasons, such as many severe but non-life-threatening injuries, increasing trends that threaten to increase the fatalities and incapacitating injuries, or “low-hanging fruit” for which strong countermeasures exist and which may have relatively large room for improvement.

Data analysis continues year-round, with intensified efforts early in the Highway Safety Plan and Grant Development Plan processes. The excellent timeliness, accuracy, and accessibility of Michigan traffic crash data allows the latest information to be incorporated into program development and implementation, going beyond a simple crash count to explore the factors involved. Examples include which days of the year have the most alcohol-involved crashes, how driver age affects fatal crash rates, which areas of a given county have the most nighttime crashes, or how demographics differ between fatal and injury pedestrian crashes in urban areas.

Authorized agencies can access the crash database directly through a variety of interfaces, including web sites and query tools. For the general public, the University of Michigan Transportation Research Institute (UMTRI) Transportation Data Center hosts Michigan Traffic Crash Facts. Crash Facts includes more than 100 tables that address the most common crash data needs, with an archive dating back to 1992. The award-winning web site (<http://www.michigantrafficcrashfacts.org>) also includes fact sheets, a version focused on local data, and a query and mapping tool that allows users to submit specific queries, in case the pre-made tables are not quite what is needed. Crash Facts users have access to all the crash data and all the forms, minus personal identifiers. Crash Facts uses the crash data file from the official end of year statistics, creating a consistent set of numbers, while the live database continues to receive updated statistics as data is received from late submitting agencies.

The problem identification is based on previous years’ statistics and trend data reported from the previous five years.

2. GOAL DETERMINATION AND ANALYSIS

Goals are statements of program intent or purpose, consistent with the mission of the organization. The 2012 performance plan retains the goals identified in 2009 based on data analysis and trend data analysis from the previous five years. Target areas are the top factors involved in fatal and incapacitated injury crashes, along with emerging issues, and quantitative targets are set through crash projections based on five-year crash trends.

The following section begins with a summary of Michigan traffic crash statistics from 2005 through 2010 (the most current data available). OHSP’s revised long-term goals through 2012 follow, along with annual benchmarks.

Crash Data Comparison - 2005-2010

	2005	2006	2007	2008	2009	2010	% Change 05-10
Total Crashes	350,838	315,322	324,174	316,057	290,978	282,075	-20%
Fatal Crashes	1,030	1,002	987	915	806	868	-16%
People Injured	90,510	81,942	80,576	74,568	70,931	70,501	-22%
People Killed	1,129	1,084	1,084	980	871	937	-17%
Death Rate (100M VMT)	1.09	1.05	1.04	0.97	0.91	1.0	-8%
Fatal Crash Rate (100M VMT)	1.00	0.97	0.95	0.91	0.84	.9	-10%
VMT (Billions)	103.2	104.0	104.6	100.9	95.9	97.6	-5%
Registered Vehicles (Millions)	9.69	8.70	8.33	8.38	8.15	8.49	-12%
Population (Millions)	10.11	10.12	10.09	10.00	9.97	9.88	-2%

The 2010 crash numbers were down in several categories and up in other categories noting that perhaps the general upward trend has somewhat slowed and normalized.

Goals for 2008-2012 are based on 2003-2007 data. The annual trend in fatalities was a 4% improvement (geometric mean), and this rate has been applied to each area, after adjusting for annual variation.¹ Exceptions are noted individually. Note that the latest year's results may be better than the next year's goal. Benchmarks were set for several years at once, averaging out over good and bad years. Goals have not been changed after an exceptionally good year, such as 2009, because some reversion to the mean is normal and expected.

¹ For each goal, an ordinary least squares regression was applied to 2003-2007, yielding a 2007 trend line value that smoothed the year-to-year variance. The 4% annual improvement was deducted from this value. The improvement value is 4% of the previous year, not 4% of the 2007 baseline year, so 2009's goal is 96% of the 2008 goal, and so on. Fatality and injury counts may differ from previously published sources due to updates.

EXHIBIT 2: OHSP FY 2012 Goals at a Glance	2003 actual	2007 actual	2008 actual	2009 actual	2010 actual	2011 goal	2012 goal
Fatalities	1,283	1,084	980	871	937	896	860
Fatalities per 100 million vehicle miles traveled	1.31	1.04	0.97	0.91	1.0	0.86	0.82
Injuries	105,555	80,576	74,568	70,931	70,501	66,382	63,718
Fatalities and incapacitating injuries ("KAs")	11,203	8,569	7,705	7,382	6,917	7,068	6,784
KAs involving alcohol	2,143	1,711	1,504	1,396	1,326	1,451	1,393
fatalities to unrestrained vehicle occupants	346	252	239	194	202	199	191
observed daytime safety belt use (front seat occupants)	84.8%	93.7%	97.2%	97.9%	95.2%	97.0%	97.0%
KAs to vehicle occupants ages 0 to 8	240	131	119	113	108	98	94
KAs at intersections	3,781	2,750	2,391	2,499	2,351	2,274	2,183
KAs involving lane departure	4,102	3,324	3,183	2,922	2,750	2,724	2,614
KAs on local roads	6,964	5,130	4,626	4,396	4,165	4,199	4,030
KAs involving motorcycles	806	991	1,030	865	778	954	954
KAs to pedestrians	762	600	577	552	535	512	491
KAs to males	6,183	4,945	4,487	4,209	4,005	4,101	3,936
KAs involving drivers ages 16 to 20	2,680	1,947	1,691	1,639	1,524	1,558	1,495
KAs involving drivers ages 21 to 24	1,719	1,244	1,050	973	991	1,023	982
KAs from 3pm to 6pm	2,248	1,722	1,537	1,552	1,363	1,425	1,368
KAs from midnight to 3am	1,456	881	741	698	677	681	654
KAs from noon Friday to noon Sunday	3,677	2,928	2,603	2,606	2,261	2,435	2,338
KAs from July to September	3,319	2,566	2,228	2,158	2,124	2,062	1,979

Traffic Fatalities:

The single most important goal in traffic safety is to reduce traffic fatalities. Whatever other factors may be considered, the final measure of success must always be the lives of people.

Before 2002, Michigan had not had fewer than 1,300 traffic fatalities since 1945. Fatalities have been steadily dropping: 2002 has had fewer than 1,300, dropping below 1,200 in 2004, 1,100 in 2006, 1,000 in 2008, and 900 in 2009. However in 2010, fatalities increased to 937, still three higher than the 2010 goal.* The Statistical Abstract of the United States lists 1924 as the last year with fewer than 871 Michigan traffic fatalities. There were 863 in 1924, so Michigan's 2012 goal is to get below the 1924 fatality count, ever downward on the path to zero.

Traffic Fatalities					
Year	Actual		Year	Goal	Actual
2003	1,283		2008	1,014	980
2004	1,159		2009	973	871
2005	1,129		2010	934*	937
2006	1,084		2011	896	
2007	1,084		2012	860	

Vehicle Mileage Fatality Rate:

The Vehicle Miles Traveled (VMT) fatality rate adjusts the worst outcome of a crash by a common exposure variable. This is defined as how many people have died in a vehicle related crash compared to how many miles are driven on the roads by everyone. The VMT fatality rate has been a consistent measure used nationally for many years, and it provides a reliable means of tracking progress over a long period of time.

If fatalities are decreasing while miles driven are increasing, the state is getting safer faster than the simple fatality count suggests. If both are decreasing, then some of the improvement is just a factor of people driving less, rather than the roads becoming safer. If one is decreasing while the other is increasing, then a closer examination of the activity is warranted in order to determine what is actually happening.

The Michigan Department of Transportation revised the VMT calculation process for 2007, suggesting that previous years may have underestimated VMT. The final effects of said change may bear future consideration.

VMT death rate					
Year	Actual		Year	Goal	Actual
2003	1.31		2008	0.97	0.97
2004	1.16		2009	0.93	0.91
2005	1.11		2010	0.89	1.00**
2006	1.05		2011	0.86	
2007	1.04		2012	0.82	

(number of fatalities/100 million VMT)(**based on 2010 VMT rate)

Traffic Injuries:

While Michigan strives to achieve zero fatalities involving traffic crashes, it also seeks to decrease the severity of traffic-related injuries.

Crash avoidance seeks to reduce crashes entirely with no crashes, fatalities, or injuries as the goal. Crash mitigation takes some number of crashes as a given and seeks to reduce the severity of the situations as it relates to injuries.

Traffic Injuries					
Year	Actual		Year	Goal	Actual
2003	105,555		2008	75,062	74,568
2004	99,680		2009	72,049	70,931
2005	90,510		2010	69,158	70,051
2006	81,942		2011	66,382	
2007	80,576		2012	63,718	

Fatalities and Incapacitating Injuries (KAs):

Michigan classifies injuries according to the KABC0 scale: K=fatal; A= incapacitating; B=non-incapacitating; C=possible; and 0=none (property damage only).

Fatal and incapacitating injuries are the most consistent measure of severe crashes available for traffic safety planning. Fatalities and incapacitating injuries include the most worrisome crashes with the greatest harm and happen in large enough numbers to perform meaningful analysis.

Fatalities and Incapacitating Injuries (KAs)					
Year	Actual		Year	Goal	Actual
2003	11,203		2008	7,992	7,705
2004	10,429		2009	7,671	7,382
2005	9,615		2010	7,363	6,917
2006	8,702		2011	7,068	
2007	8,569		2012	6,784	

Alcohol-Impaired Driving:

Had-been-drinking (HBD) crashes are disproportionately more severe than other crashes, constituting 30-40% of fatal crashes each year. Despite decades of education and enforcement efforts, alcohol-impaired driving remains a devastating traffic safety and public health problem.

Other forms of impairment are also dangerous, but are less apparent in the crash data and often connected to alcohol when present. The year 2009 showed a large increase in drug-impaired fatalities, but increased testing for Schedule 1 drugs played a part in that. Drowsiness and distraction also impair driving, but the data there is poor because it cannot be observed after the crash.

KAs involving alcohol					
Year	Actual		Year	Goal	Actual
2003	2,143		2008	1,640	1,504
2004	2,040		2009	1,575	1,396
2005	1,943		2010	1,511	1,326
2006	1,806		2011	1,451	
2007	1,711		2012	1,393	

KAs involving drugs					
Year	Actual		Year	Goal	Actual
2003	318		2008*	370	399
2004	357		2009	363	358
2005	342		2010	356	451
2006	378		2011	349	
2007	355		2012	342	

There are estimated goals set for drug-involved fatalities and serious injuries. The increased drug testing began in 2008*, so previous years' results may not provide a consistent basis for comparison – recorded drug-involved crashes are more likely to increase due to updating training for law enforcement officials such as the DRE program better known as drug recognition experts in crash situations.

Safety Belt Use:

Safety belts are the most effective means of reducing injury severity and preventing death in the event of a crash. Reducing non-use of safety belts substantially improves crash survivability.

Unrestrained fatalities follow changes in the observed safety belt use rate, but note the percentage of people killed restrained is much higher than the percentage of people unrestrained. This is partly due to the life-saving effect of belts, partly to lower risk-aversion among people who do not use safety belts, and partly to differences in observed use and actual use. In compliance with federal guidelines, Michigan observes daytime front-seat occupants in an area covering at least 85% of the state's population. Belt use may be lower at night, in the back seat (where it is not legally required above age 16), or in more rural counties outside the survey area. Even if observed use hits 100%, there still will be room for improvement.

Michigan had the highest safety belt use in the nation in 2009 at 97.9 percent, following 2008's highest rate ever recorded in the state at 97.2 percent. As there are no benchmarks for continued progress from the highest rate, the goal has been set to maintain this record.

Fatalities to unrestrained vehicle occupants					
Year	Actual		Year	Goal	Actual
2003	346		2008	225	239
2004	296		2009	216	194
2005	262		2010	207	202
2006	249		2011	199	
2007	252		2012	191	

(motor vehicle occupants only, excludes unknown and unavailable)

Safety belt use					
Year	Actual		Year	Goal	Actual
2003	84.8%		2008	96.0%	97.2%
2004	90.5%		2009	97.0%	97.9%
2005	92.9%		2010	97.0%	95.2%
2006	94.3%		2011	97.0%	
2007	93.7%		2012	97.0%	

(observed, daytime, front seat occupants)

Child Passenger Safety:

Safety belts are designed for adults. Children under eight need a booster seat for the belt to fit properly, and children under four need a special child restraint. Parents sometimes do not know what the right seat is, how to install it properly, or why it is necessary. Officers may not have much more training, and it is difficult to observe violations of child safety seat laws. Children are often under-protected in the event of a crash.

The effects of child passenger safety show up more in injury than fatality data. The belt alone is often enough to prevent a death, but the proper child restraint is what keeps the crash from causing massive internal injuries, particularly to the neck, spine, and intestines.

KA injuries, passenger vehicle occupants ages 0-8					
Year	Actual		Year	Goal	Actual
2003	240		2008	110	119
2004	191		2009	106	113
2005	162		2010	102	108
2006	130		2011	98	
2007	131		2012	94	

(excludes motorcycles)

Intersection Crashes:

While most drivers can keep a car going in a straight line, problems occur when cars interact with each other. The severity of intersection crashes is exacerbated by the risk of angle (T-bone) collisions during turns. About one-third of all crashes happen in or near intersections. Of this one-third, 39% occur at signalized intersections, 37% at sign-controlled intersections and 24% occur at intersections with no control at all.

Intersection problems can be related to engineering, behavior, or exposure. Any program working to improve safety in urban areas will necessarily affect intersection crashes.

KAs at intersections					
Year	Actual		Year	Goal	Actual
2003	3,781		2008	2,571	2,391
2004	3,533		2009	2,468	2,499
2005	3,188		2010	2,369	2,351
2006	2,869		2011	2,274	
2007	2,750		2012	2,183	

(number of KAs coded as roadway area=intersection (values 7,8,9))

Lane Departure:

Most fatal crashes happen when a car leaves its lane. The driver steers into a ditch, misses a turn, crosses the center line, or otherwise puts the car into conflict with a large object. "Lane departure" includes not just roadway departure, but also sideswipes and highly dangerous head-on crashes.

Lane departure is connected to drunk, drowsy, and distracted driving. Any sort of impairment makes someone more likely to drift or miss a turn. Focused driving is a key part of avoiding a vehicle crash.

KAs involving lane departure					
Year	Actual		Year	Goal	Actual
2003	4,102		2008	3,080	3,183
2004	3,795		2009	2,956	2,922
2005	3,507		2010	2,838	2,750
2006	3,333		2011	2,724	
2007	3,324		2012	2,614	

(number of KAs coded with any of the three lane departure values)

City-County Roads:

While most miles are driven on state roads, most serious crashes happen on local roads. Local roads present a variety of challenges for all aspects of traffic safety, with the majority of intersections and miles of pavement.

With most serious crashes taking place on local roads, any effort directed to the whole will affect this part, and anything targeting a high-crash location is almost certain to take place on local roads.

KAs on local roads					
Year	Actual		Year	Goal	Actual
2003	6,964		2008	4,748	4,626
2004	6,236		2009	4,557	4,396
2005	5,845		2010	4,374	4,165
2006	5,230		2011	4,199	
2007	5,130		2012	4,030	

(number KAs in crashes coded as: "County road, city street, or unknown")

Motorcycles:

Motorcycles are the only area of traffic safety consistently increasing in fatalities and injuries. Motorcycle ridership is increasing, and so are motorcycle crashes and fatalities. Some of this effect is from increased exposure: the same crashes happen, only with motorcycles instead of cars. Some is from decreased protection. Rider information also suggests young motorcyclists are not seeking proper training and licensure, while older riders are using more powerful motorcycles which the rider may have less experience with. The largest increase in motorcycle use is among older riders, which also increases the effect of lower crash survivability: older bodies are even more likely to sustain damage and decreased recovery abilities.

OHSP's goal is to reduce motorcycle-involved fatalities and serious injuries back down to the 2004 trend value.

KAs involving motorcycles					
Year	Actual		Year	Goal	Actual
2003	806		2008	954	1,030
2004	794		2009	954	865
2005	931		2010	954	778
2006	833		2011	954	
2007	991		2012	954	

(any KAs in the crash, not just to motorcyclists)

Pedestrians:

Pedestrians are about one-eighth of traffic fatalities each year. There are relatively few effective behavioral interventions for improving pedestrian safety. Some relate to helping drivers avoid pedestrians, while others hope to keep pedestrians out of harms way. An issue for pedestrian safety education is the difference between those hit and those killed. Due to relatively high exposure, those most likely to be hit are young non-drivers during the day. Due to increased bodily frailty and alcohol use, older pedestrians at night are more likely to be hit and killed.

KAs to pedestrians					
Year	Actual		Year	Goal	Actual
2003	762		2008	578	577
2004	785		2009	555	552
2005	701		2010	533	535
2006	637		2011	512	
2007	600		2012	491	

Men:

Most of the risky behaviors that can kill someone and those present are more common in men. Men buckle up less, drink and drive more, drive faster, and drive more motorcycles. These behaviors are even more prevalent in young men.

Federal surveys of travel trips estimate that men do about 61 percent of the nation's driving, so it is expected men are in more crashes. Traffic fatalities are consistently two-thirds or more male. Women, exposed to the same traffic variables, are still seeing the number of serious and fatal injuries fall faster than that of men.

KAs to males					
Year	Actual		Year	Goal	Actual
2003	6,183		2008	4,637	4,487
2004	5,874		2009	4,451	4,209
2005	5,471		2010	4,272	4,005
2006	5,016		2011	4,101	
2007	4,945		2012	3,936	

Young Drivers:

Younger drivers crash more often. Superior reflexes and more practice using cell phones do not overcome inexperience and higher risk taking. Crash survivability is better in youth, because young bodies break less and heal more quickly, but making more severe errors can offset this. Of those killed in crashes with teen drivers, about one-third are the drivers themselves, one-third are passengers with a young driver, and one-third are other drivers, passengers, and pedestrians.

Drivers under age eighteen participate in graduated driver licensing, which allows gradual exposure to greater driving demands under structure and supervision. Crash involvement per driver then peaks at age eighteen, with no supervision, more exposure, and still incomplete driving skills. Persons under age twenty-one may not legally drink, which is not to say that all abstain. Alcohol-involved crashes then peak at age twenty-one, with increased opportunity. As responsibilities increase and brain development completes in the mid-twenties, crash involvement drops precipitously. By age twenty-five, the most dangerous years are past, and after thirty-five risk is average.

Note that the 2007 trend discontinuity in KAs involving drivers ages 16 to 20 is attributable to unusual weather. The winter of 2006 to 2007 came late, with the primary crash effect being shifting young driver crashes from late 2006 to early 2007. The total number was not unusual, just the timing across the calendar.

KAs involving drivers ages 16 to 20					
Year	Actual		Year	Goal	Actual
2003	2,680		2008	1,761	1,691
2004	2,488		2009	1,691	1,639
2005	2,212		2010	1,623	1,524
2006	1,883		2011	1,558	
2007	1,947		2012	1,495	

KAs involving drivers ages 21 to 24					
Year	Actual		Year	Goal	Actual
2003	1,719		2008	1,157	1,050
2004	1,622		2009	1,110	973
2005	1,503		2010	1,065	991
2006	1,274		2011	1,023	
2007	1,244		2012	982	

Afternoon Rush Hour:

High exposure leads to high crash numbers. At the end of the work- and school-day, there are more cars on the road, with more crashes and fatalities. It is not disproportionately negative, but it is Michigan's time with the most fatalities.

The morning rush hour does not show as much of a peak. Late-day drivers are more likely to be tired and less likely to be caffeinated. This becomes worse over the week as sleep deprivation builds up, with Friday being the worst at this time slot. Drivers have shorter tempers and attention spans drift after a long day. Dinnertime and happy hour are the peak times for alcohol-involvement for drivers over twenty. Restraint use is also lower in the evening than the morning.

KAs from 3pm to 6pm					
Year	Actual		Year	Goal	Actual
2003	2,248		2008	1,612	1,537
2004	2,214		2009	1,547	1,552
2005	2,026		2010	1,485	1,363
2006	1,726		2011	1,425	
2007	1,722		2012	1,368	

Nighttime Driving:

Traffic is light late at night, but the crashes are disproportionately severe and likely to involve alcohol. Midnight to 3am includes bar closing time, and it is the peak time for alcohol impaired driving. Alcohol behaves synergistically with drowsiness, making late-night drivers even less competent.

Alcohol-involvement starts heading up around 9pm, but does not start spiking until midnight. Alcohol-involved crashes peak in the 2am to 3am hour, when bars close. After four AM, traffic is too light to have many crashes.

KAs from midnight to 3am					
Year	Actual		Year	Goal	Actual
2003	1,456		2008	770	741
2004	1,034		2009	739	698
2005	1,000		2010	710	677
2006	913		2011	681	
2007	881		2012	654	

Weekend Driving:

Serious crashes spike almost every weekend. Increased alcohol use, nighttime driving, visiting unfamiliar areas, traffic to popular spots, and decreased attention all contribute to a higher rate of serious crashes on Friday and Saturday evenings.

Noon to noon was noted as the crash peak to include both Friday after-work and Saturday/Sunday night. The Saturday night crash peak actually takes place on Sunday morning (after midnight), while the weekend peak starts early Friday afternoon as people leave work or school.

KAs from noon Friday to noon Sunday					
Year	Actual		Year	Goal	Actual
2003	3,677		2008	2,754	2,603
2004	3,504		2009	2,643	2,606
2005	3,233		2010	2,537	2,261
2006	3,002		2011	2,435	
2007	2,928		2012	2,338	

Summer Travel:

While many would expect more crashes in inclement weather, the summer months see more travel, travel to unfamiliar destinations, and all the distractions are associated with such travel.

August is Michigan's worst month for fatalities, overall and alcohol-involved, with July to September as the worst three-month period. Serious crashes are more common from June to November and significantly less common from January to March. If the entire year had the same fatality rate as January to March, Michigan would have had 81 fewer fatalities per year from 2003 to 2007.

KAs from July to September					
Year	Actual		Year	Goal	Actual
2003	3,319		2008	2,332	2,228
2004	3,055		2009	2,238	2,156
2005	2,805		2010	2,148	2,124
2006	2,481		2011	2,062	
2007	2,566		2012	1,979	

3. TRAFFIC SAFETY PARTNER INPUT

Input from traffic safety partners is critical to the development of the Highway Safety Plan and to the projects selected. OHSP constantly solicits feedback on how programs are working, which directions to pursue, and what new programs look promising.

The importance of external input cannot be overstated. Meetings and conferences, progress reports from grantees, and discussions in person, by telephone, and over e-mail all provide valuable information that works its way into OHSP programs. Simple conversations have led to significant improvements in programs that save lives.

Governor's Traffic Safety Advisory Commission

The Governor's Traffic Safety Advisory Commission (GTSAC) consists of the Governor (or a designee); the Directors (or designees) of the Departments of Community Health, Education, State, State Police, and Transportation, the Office of Highway Safety Planning, and the Office of Services to the Aging; and three local representatives from the county, city, and township levels.

The GTSAC meets on a bi-monthly basis. Agenda development is a process open to all traffic safety advocates within the state and is available through OHSP's web site (<http://www.michigan.gov/ohsp-gtsac>). Communication between GTSAC members and among traffic safety advocates throughout Michigan is also accomplished through a web site and **LISTSERV®** that has more than 200 members. Listserv members receive GTSAC and traffic safety news and information.

Strategic Highway Safety Plan

In 2006, the GTSAC approved a statewide Strategic Highway Safety Plan, identifying priority areas for all GTSAC member agencies to address and to set an agenda for traffic safety efforts in the state. Each priority area has an associated Action Team to keep progress moving forward. OHSP staff participates in these Action Teams and incorporate information and recommendations into the Highway Safety Plan.

Having a set of statewide priorities coordinates the OHSP-led Highway Safety Plan with activities undertaken at the variety of Michigan organizations working on traffic safety. Action plans are updated frequently to reflect emerging issues or completed action items. The Strategic Highway Safety Plan itself was updated in 2008.

Program Area Network Meetings

In addition to the GTSAC Action Teams, OHSP program staff have traffic safety networks across the state and nation that help generate ideas, highlight problems, and identify appropriate strategies to resolve them. Meetings with partners across the state allow OHSP to determine where resources are available to leverage, which partners have enthusiasm or unique expertise, and whether model programs are working (or not, and why) in Michigan communities.

Traffic Safety Summit

The annual Michigan Traffic Safety Summit is the state's central event for traffic safety information-sharing and networking. It allows OHSP and other partners to promote promising ideas, solicit input and feedback from partners, and showcase programs from the local, state, and national levels.

Additional Planning Resources

OHSP consults a wide variety of resources for problem identification, priority setting, program selection, and grant awards. These ensure that Michigan is following best practices and using the most effective means of reducing deaths and injuries. Some of these resources include:

- The Michigan Department of State Police Strategic Plan and other state and local plans.
- National plans, priorities, and programs, including those from the United States Department of Transportation (USDOT), Federal Highway Administration (FHWA), and National Highway Traffic Safety Administration (NHTSA).
- NHTSA publication "Countermeasures That Work: A Highway Safety Countermeasure Guide For State Highway Safety Offices."
- NCHRP Report 622, "Effectiveness of Behavioral Highway Safety Countermeasures"
- USDOT, American Association of State Highway and Transportation Officials (AASHTO), Transportation Research Board (TRB), and Association of Transportation Safety Information Professionals (ATSIP) publications and conferences.
- Academic publications and research reports.
- Staff participation on various committees and associations, including: GTSAC Action Teams, The Michigan Model for Comprehensive School Health Education Steering Committee, Michigan Section of the Institute of Transportation Engineers, Michigan Association of Chiefs of Police, Michigan Sheriffs' Association, Michigan Pupil Transportation Advisory Committee, Prevention Network, Michigan Coalition to Reduce Underage Drinking, the Michigan Deer Crash Coalition, the Association of Traffic Safety Information Professionals, Michigan Transportation Research Board, and local Traffic Safety Committees.
- Feedback from grantees during the implementation, monitoring, and evaluation of traffic safety projects.
- Input provided by the general public.
- OHSP staff attendance at state, regional, and national conferences and seminars to network and learn about developing tools, trends, and issues.

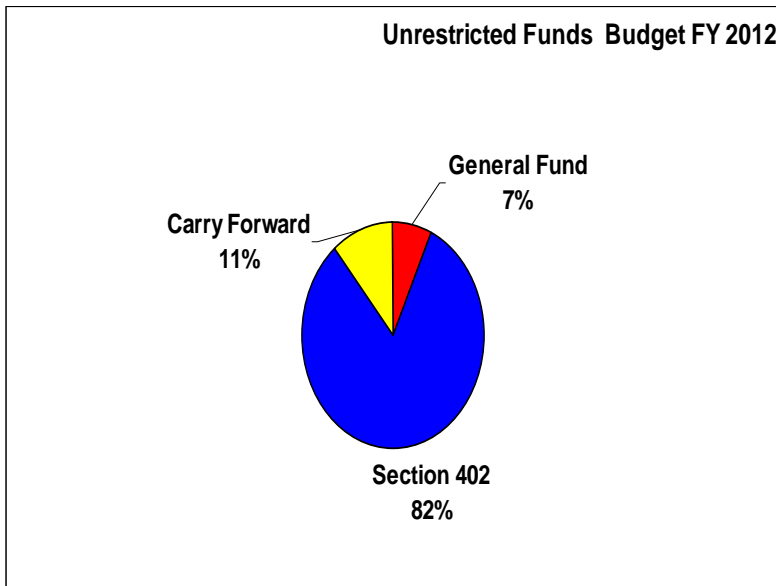
4. BUDGET DEVELOPMENT

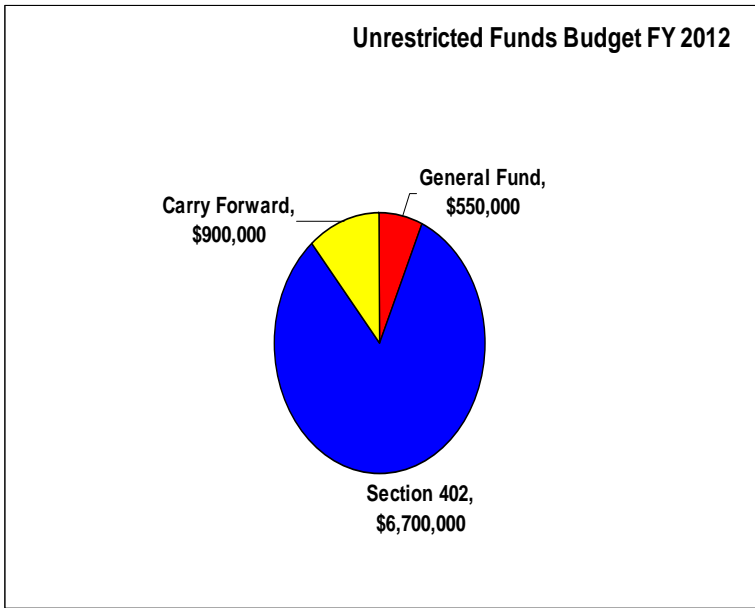
An estimated Highway Safety Planning budget is developed as staff begins drafting grant development plans. Budgeting considers new and existing funding sources, allocated between program areas based on problem identification, promising projects, needs for program continuity, and effectiveness of strategies in prior years.

The HSP management team considers the merits of funding requests along with the level of program funding from previous years, funding of other related programs, special funding sources, and office-wide long-range goals before approving budgets for each program area. Program managers share responsibility for reviewing strategies to determine which should be fully funded, which can proceed with amendments, and which are not feasible. This process can shift the initial budget allocation between program areas to accommodate essential and/or promising projects that warrant special support.

Exhibits 3, 4, 5, and 6 illustrate the projected sources of funding, program level budgets, and the distribution of funding by type.

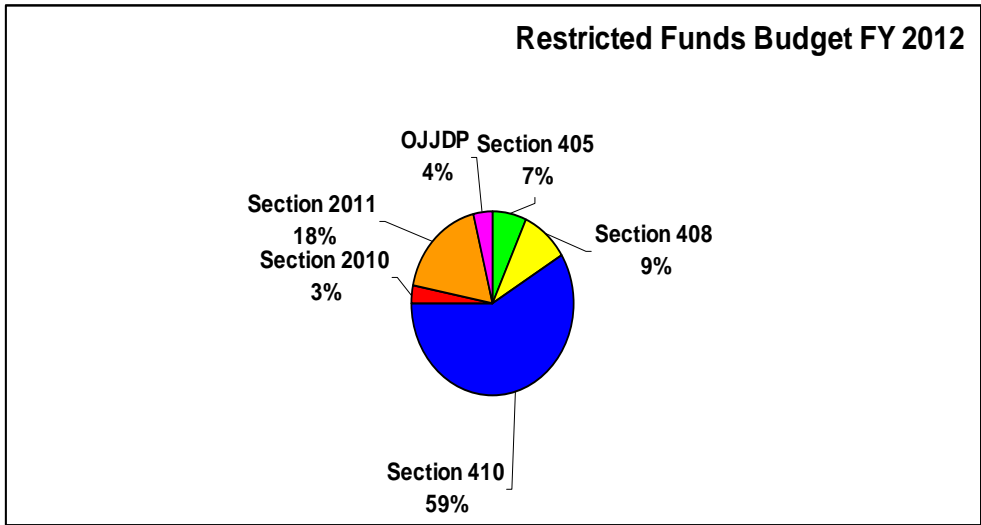
EXHIBIT 3: Unrestricted Program Funding Sources, FY 2012



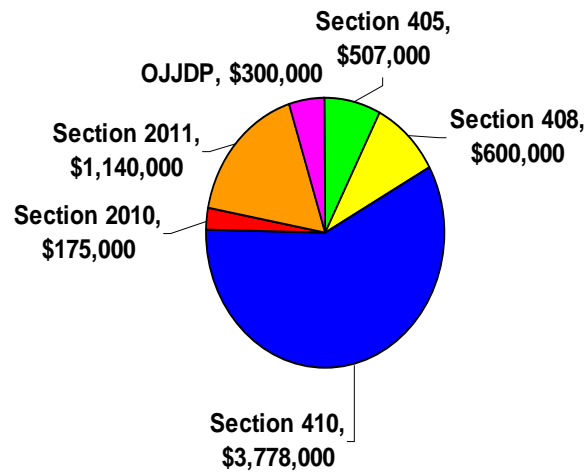


State General Fund	Section 402	Carry Forward
\$550,000	\$6,700,000	\$900,000

EXHIBIT 4: Restricted Program Funding Sources, FY 2012



Restricted Funds Budgets FY 2012

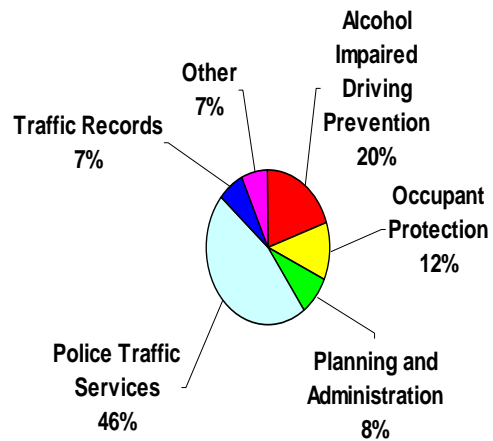


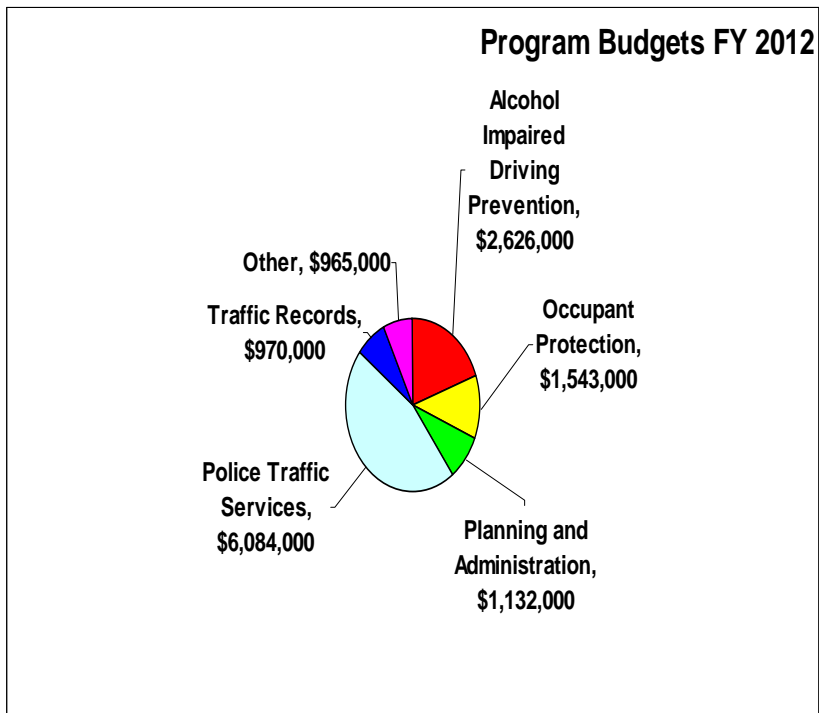
Section 405	Section 408	Section 410	Section 2010
\$507,000	\$600,000	\$3,778,000	\$175,000

Section 2011	OJJDP
\$1,140,000	\$300,000

EXHIBIT 5: Program Budgets, FY 2012

Program Budgets FY 2012



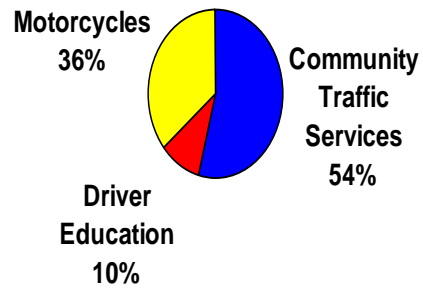


Alcohol	Occupant Protection	Planning/ Administration	Police Traffic Services
\$2,626,000	\$1,543,000	\$1,132,000	\$6,084,000

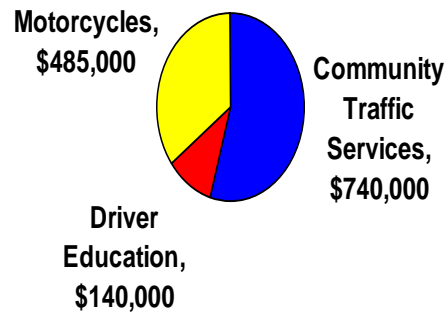
Traffic Records	Other
\$970,000	\$965,000

EXHIBIT 6: "Other" Program Budgets, FY 2012

Other Program Budgets FY 2012



Other Program Budgets FY 2012



Motorcycles	Community Traffic Services	Driver Education
\$485,000	\$740,000	\$140,000

5. PROJECT SELECTION

Projects are selected based on the potential for impacting traffic safety problems and moving Michigan towards the statewide traffic safety goals. Determination of which projects to pursue precedes grant solicitation in Michigan, flowing from problem identification. Some states have open solicitations in which potential grantees submit the projects which may be a point of interest for pursuit, and the state highway safety office chooses amongst the projects. In Michigan, the problems, target areas, and likely countermeasures are selected in advance, usually in consultation with potential grantees, but not dependant on volunteers or proposals from the field. OHSP actively seeks out grantees in problem areas with particular expertise.

When recommending programs, OHSP program staff consider:

- the population to be reached;
- the extent of the problem in the target population;
- where and when implementation must take place;
- the expected effectiveness of the proposed project;
- which partners are available and competent to implement projects;
- the most efficient and effective means of implementing programs;
- available funding sources.

In some instances, programs such as training, public information, and mobilization campaigns are most effectively coordinated at the state level. OHSP oversees these programs. Some projects must take place at the local level, where the community experiencing the problem will have unique competence in addressing its causes.

Grant Development Plans

Following dialogue with OHSP leadership about office priorities, staff prepares the grant development plans (GDPs). The GDP assists in ensuring sufficient preparations are made before program implementation, and it also serves as documentation for the program area. OHSP develops GDPs as a team effort where programs cross network areas, and serve as valuable internal planning tools. Each GDP contains:

- specific information about the strategy the project will pursue;
- potential grantees;
- funding levels and sources;
- project schedules.

Exhibit 6 is an example of the GDP form.

EXHIBIT 6: FY2011 Grant Development Form

Grant Development Plan

due March 4, 2011

Strategy Name:

Background/Problem Statement

Desired outcomes/results

Impact Statement (What will happen if we do not have this program?)

Funding Recommendation

HSP Goal/Objective targeted

Information sources and partners consulted

How will this strategy be achieved? Why was this strategy selected? (Use more detail if new or involves personnel, equipment, or communications campaigns)

Year of funding?			Will the strategy continue next year?	Y N
Expected grantee			Estimated budget	
October 1 start-up required?	Y N	Split-funded from FY2011?		Y N
Seed-funding grant needing post-OHSP continuation plan?	Y N	If so, does it have one?		
Funds for Program Mgt. Section in-house grant?	Y N	Funds for Comm. Section in-house grant?		Y N
For the benefit of locals?	Y N	PI&E materials being made?		Y N
Strategic Highway Safety Plan action item?				Y N
Contractual costs?	Y N	Personnel costs?		Y N
Indirect costs?	Y N	If so, indirect rate		
Program income?	Y N	If so, how much?		
Any equipment?	Y N	If so, matching funds		
Equipment over \$5,000 per item?	Y N	If so, matching funds		
Out-of-state travel?	Y N	If so, purpose of travel?		

Objectives (Specific, Measurable, Attainable, Relevant, Time-bound)
(3 or 4: what is the purpose of this grant?)

Additional notes

Funding Source	Amount	Funding Source	Amount
	\$		\$
	\$		\$

Author

Date

Approval

Date

OHSP program area staff conduct program area presentations for OHSP leadership and staff. These presentations begin with an overview of the traffic crash data, followed by an overview of the GDP's selected to address the identified problems. This presents an opportunity for back-and-forth questioning and discussion, bringing out detail and emphasis that might be lost in the pages of text. It also allows everyone in the office to become better aware of plans and partnership opportunities in other program areas.

Management Review

OHSP management reviews the material presented for final selection of which programs will receive funding. This recapitulates the list of factors staff consider in the programs and recommendations, providing an office-wide rather than program area-specific perspective. In this way, greater attention can be placed on budget limitations and on balancing demands and opportunities in various program areas.

Grant development begins with final approval.

6. PERFORMANCE MEASURES

OHSP tracks many variables to monitor progress of crash problems and to set program goals. Crash data is key, as discussed in Section 2. Each program also has its own goals, established in dialogue between program staff and grantees. Monitoring and evaluation is an ongoing process.

Other publications available for performance measurement include the Annual Evaluation Report and Michigan Traffic Crash Facts.

The National Highway Traffic Safety Administration and Governors Highway Safety Association have agreed on a minimum set of performance measures to be used by state and federal agencies in the development and implementation of behavioral highway safety plans and programs. The measures follow. All fatality numbers are from the Fatal Analysis Reporting System (FARS), with the rest coming from state databases and surveys. Goals are copied from Section 2 or set by the same procedure. (Goals may be at or above earlier years' actual crash numbers during especially good years. Goals are set from the normalized trend values to reduce the effects of annual variation. That is, if last year was unusually good for a program area, next year's goal should realistically assume some regression to the mean.)

2009 FARS data was not available before the FY2011 Performance Plan was due. The relevant boxes have been left blank for later completion.

Traffic Safety Performance Measures for States and Federal Agencies
Crash Data and Goals

	actual (from)						goal (to)	
	2005	2006	2007	2008	2009	2010	2011	2012
Traffic fatalities	1,129	1,086	1,087	980	871	937	896	860
Serious ("A") Injuries in traffic crashes	8,486	7,618	7,485	6,725	6,511	6,917	6,172	5,924
Fatalities per 100 million VMT	1.09	1.04	1.04	0.97	0.91	1.0	0.86	0.82
Rural fatalities per 100 million VMT	2.02	2.03	2.00	1.84	1.27	Pending		
Urban fatalities per 100 million VMT	0.67	0.59	0.61	0.56	.72	Pending		
Unrestrained passenger vehicle occupant fatalities, all seat positions	270	252	256	241	199	202	199	191
Fatalities in crashes involving a driver or motorcycle operator with a BAC of .08+	327	335	304	282	246	174	267	256
Speeding-related fatalities	243	219	242	232	205	170	189	182
Motorcyclist fatalities	124	114	123	128	90	127	128	128
Unhelmeted motorcyclist fatalities	22 20	13 9	11 8	14 8	11 6	35 4	14	14
Drivers age 20 or younger in fatal crashes	208	183	213	166	151	119	163	156
Pedestrian fatalities	137	136	131	114	118	133	108	104
Safety belt use (daytime, observed)	92.9%	94.3%	93.7%	97.2%	97.9%	95.2%	97.0%	97.0%
Safety belt citations issued during grant-funded enforcement activities (FY)	42,481	35,388	25,310	23,924	21,510	11,880		
Impaired driving arrests made during grant-funded enforcement activities (FY)	2,050	2,706	2,200	2,685	2,381	1,638		
Speeding citations issued during grant-funded enforcement activities (FY)	7,081	9,076	6,642	12,711	10,341	5,296		

* 2009 FARS data used. Goals are not required for VMT death rate components.

Traffic Safety Performance Measures for States and Federal Agencies
Telephone Survey Responses (Percentages)

Jan 06	Apr 06	May 06	June 06	Aug 06	Sept 06	Aug 07	Sept 07	May 08	June 08	July 08	Aug 08	Sept 08	Mar 09	May 09	June 09	July 09	Aug 09	Sept 09	May 10	June 10	Aug 10	May 11	June 11
"In the past 30 days, have you driven a motor vehicle, let's say, within 2 hours after drinking alcoholic beverages?": "Yes"																							
13	12	12	9	11	9	6	11	6	8	10	9	11	8	9	8	9	8	9	7	2	11	9	6
"In the past 30 days, have you seen or heard of any special effort by police to arrest drivers in your community for drunk driving?": "Yes"																							
44	22	27	28	27	41	23	35	19	20	22	16	29	14	19	17	25	20	24	23	27	31	25	16
"If you drove after having too much to drink and be able to drive safely, how likely are you to be stopped by a police officer?": "Almost certain", "Very likely," or "Somewhat likely"																							
62	63	66	71	62	63	58	51	60	65	65	73	73	71	70	70	64	70	75	75	65	71	64	66
"When driving this vehicle, how often do you wear your safety belt?" : "All the time" & "When was the last time you did NOT wear your safety belt while driving?": "I always buckle my seat belt" or "More than one year ago" (always buckles up)																							
69	82	68	71	67	71	79	73	80	67	79	74	80	80	75	83	80	86	87	92	94	94	94	97
"When driving this vehicle, how often do you wear your safety belt?": "Most of the time" or "All the time" (almost always buckles up)																							
99	97	97	99	98	97	98	97	98	97	99	97	98	98	99	99	99	98	98	95	94	96	94	97
"In the past 30 days, have you seen or heard of any special effort by police to ticket drivers in your community for safety belt violations?": "Yes"																							
31	19	30	56	44	42	40	40	16	57	44	36	36	18	16	39	32	25	25	30	31	31	12	36
"Assume for a moment that you do not use your safety belt AT ALL while driving over the next six months. What are the chances you will receive a ticket for NOT wearing a safety belt?": "Very" or "Somewhat likely"																							
58	66	72	75	64	66	64	61	59	69	72	69	71	66	64	75	66	65	74	31	73	51	75	74
"When you drive on a local road that has a speed limit of 35 mph, how often would you say you drive faster than 40 miles per hour?": "Most of the time" or "half the time"																							
																10					8	13	7
"When you drive on a freeway with a speed limit of 70 mph, how often do you drive faster than 75 miles per hour?" : "Most of the time" or "half the time"																							
																14					18	21	20
"If you drove 10 miles per hour over the speed limit on a freeway, would you say your chances of getting a ticket would be very likely, somewhat likely, somewhat unlikely or very unlikely?": "very likely, somewhat likely"																							
																70					67	86	51

“In the past 60 days, have you read, seen, or heard anything about speed enforcement by the police?”: “Yes”																								
																	36					30	28	23

Surveys were of 400 Michigan drivers. The four Traffic Safety Performance Measures survey questions on speed were not asked before being added to a 500-driver survey in 2009. Note that the safety belt use question appears twice. The first line is “always,” the second is “usually.” “Always” is double-filtered: drivers were first asked how often they wear their belts, and if they report “always,” they were asked when they last failed to wear it; if that was any time in the past year, they were counted as “usually” rather than “always.”

Traffic Safety Performance Measures for States and Federal Agencies
GHSA/NHTSA Recommended Standardized Goal Statements

- C-1) To decrease traffic fatalities 18.5 percent from the normalized 2007 value of 1,056 to 860 by December 31, 2012.
- C-2) To decrease serious ("A") traffic injuries 18.5 percent from the normalized 2007 value of 8,326 to 5,924 by December 31, 2012.
- C-3a) To decrease fatalities/VMT 18.5 percent from the normalized 2007 value of 1.01 to 0.82 by December 31, 2012.
- C-4) To decrease unrestrained passenger vehicle occupant fatalities in all seating positions 18.5 percent from the normalized 2007 value of 234 to 191 by December 31, 2012.
- C-5) To decrease alcohol impaired driving fatalities in which a driver has at least a .08 BAC 18.5 percent from the normalized 2007 value of 314 to 256 by December 31, 2012.
- C-6) To decrease speeding-related fatalities 18.5 percent from the normalized 2007 value of 223 to 182 by December 31, 2012.
- C-7) To maintain motorcyclist fatalities at the normalized 2007 value of 128 through December 31, 2012.
- C-8) To maintain un-helmeted motorcyclist fatalities at the normalized 2007 value of 14 through December 31, 2012.
- C-9) To decrease drivers age 20 or younger involved in fatal crashes 18.5 percent from the normalized 2007 value of 191 to 156 by December 31, 2012.
- C-10) To reduce pedestrian fatalities 18.5 percent from the normalized 2007 value of 127 to 104 by December 31, 2012.
- B-1) To maintain statewide observed seat belt use of front seat outboard occupants in passenger vehicles above the 2008 usage rate of 97 percent through December 31, 2012.

The calculations are explained in Section 2: Goal Determination and Analysis. The "normalized" 2007 value identifies the trend value after muting annual variation. The 18.5 percent reduction goal is the effect of an annual 4 percent improvement $(1-0.96^5)$. The actual 2007 values are in the first table in this section.